USN									

21CST601

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

Model Question Paper – 1

SOFTWARE ENGINEERING AND PROJECT MANAGEMENT

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

Instructions to Students:

Q No		Questions	Marks	CO	RBT Cognitive Level
1	a)	Describe the essence of software engineering practice.	6	CO1	L2
	b)	Briefly explain various specialized process models.	8	CO1	L3
	c)	Write 12 agility principles for those who want to achieve agility in their software development process.	6	CO1	L2
OR					
2	a)	What is meant by Industrial XP? Write an XP user story that describes the "Favorites" feature available on most of the web browsers.	7	CO1	L3
	b)	With a neat diagram, describe the overall flow of the Scrum process.	6	CO1	L2
	c)	Provide three examples of software projects that would be amenable to the component based model. Explain your answer with justification.	7	CO1	L4
3	a)	Discuss some of the problems that occur when requirements must be elicited from different customers.	5	CO2	L2
	b)	Develop a complete use cases for the following activities: (i) University Library System (ii) Buying a Stock using an online brokerage account (iii) Using credit card at a Restaurant	9	CO2	L4
	c)	What is the purpose of domain analysis? How is it related to the concept of requirements patterns? Illustrate with suitable example.	6	CO2	L2
OR					
4	a)	Define requirements engineering. List and explain seven distinct tasks of requirements engineering.	8	CO2	L2

	b)	The department of Public works for a large city has decided to develop a web-based Pothole Tracking and Repair System (PTRS). Assume suitable places, persons and attributes involved in PTRS. Draw a UML use case diagram for PTRS. Also develop an activity diagram for any one aspect of PTRS.	8	CO2	L5
	c)	How to negotiate requirements? Describe with suitable examples.	4	CO2	L2
5	a)	Propose several software quality guidelines and attributes for a good design.	8	CO3	L3
	b)	Briefly explain the taxonomy of architectural styles.	8	CO3	L2
	c)	Draw the architectural context diagram for Hospital Management System.	4	CO3	L4
		OR			
6	a)	Describe Cohesion and coupling with suitable examples.	8	CO3	L2
	b)	Explain the following design concepts: design patterns, separation of concerns, refinement and refactoring.	4	CO3	L2
	c)	Briefly describe each of the four elements of the design model.	8	CO3	L2
7	a)	Explain a strategic approach to software testing.	8	CO4	L2
	b)	With suitable example, explain basis path testing in detail.	6	CO4	L2
	c)	Compare and contrast top-down and bottom-up integration testing strategies.	6	CO4	L4
		OR			
8	a)	With a neat diagram, describe the debugging process.	6	CO4	L2
	b)	Will exhaustive testing guarantee that the program is 100 percent correct? Illustrate with suitable examples.	6	CO4	L5
	c)	Distinguish between white-box and black-box testing.	8	CO4	L3
9	a)	Briefly explain the management spectrum in software project management.	6	CO5	L2
	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)	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)	Briefly explain any four software metrics used for software measurement.	8	CO5	L3
	c)	List and explain the three major categories of software engineering resources.	6	CO5	L2

1. Answer FIVE FULL questions as per choice.