Roll No.												

PRESIDENCY UNIVERSITY
BENGALURU

School of Computer Science and Engineering

Make-up Examinations – December 2025

Semester: MK	**Date**: 27 – 12- 2025
Course Code: CSE2014	**Time**: 01:00pm – 04:00pm
Course Name: Software Engineering	**Max Marks**: 100
Program: B.TECH	**Weightage**: 50%

Instructions:

(i) Read all questions carefully and answer accordingly.
(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.		**2Mx10Q=20M**		
1	Define software engineering	**2 Marks**	**L1**	**CO1**
2	What is feasibility study? Why is it needed?	**2 Marks**	**L1**	**CO1**
3	What is functional independence? Name the two criteria used to assess it.	**2 Marks**	**L1**	**CO2**
4	What are non functional requirements? List four non functional requirements	**2 Marks**	**L1**	**CO2**
5	Define agile methodology? List any two agile frameworks	**2 Marks**	**L1**	**CO3**
6	Define the term software project stakeholder. Name the various stakeholders of a project.	**2 Marks**	**L1**	**CO3**
7	What are user stories? Give an example	**2 Marks**	**L1**	**CO3**
8	Compare manual testing and automated testing	**2 Marks**	**L2**	**CO4**
9	What is regression testing?	**2 Marks**	**L1**	**CO4**
10	What are the objectives of risk management?	**2 Marks**	**L1**	**CO4**

Part B

Answer ALL Questions. Each question carries 20 marks.			4QX20M=80M		
11	11a	Describe the ethics of software engineering	6 Marks	L1	CO1
	11b	Choose an appropriate SDLC model for a project where the requirements are not clear or are changing quickly and the final product will involve a lot of user interaction. Give reasons for your choice	6 Marks	L3	CO1
	11c	What is CMMI? Why is it used? Draw and explain the various levels in staged CMMI model?	8 Marks	L2	CO1
		or			
12	12a	Explain the essence of software practice.	6 Marks	L1	CO1
	12b	Choose an appropriate SDLC model for a large, complex project which requires risk management and frequent releases. Give reasons for your choice	6 Marks	L3	CO1
	12c	Draw a neat diagram and explain iterative waterfall model. List its advantages and drawbacks	8 Marks	L2	CO1
13	13a	Draw the use case diagram for an online shopping system. Clearly mention the following relationships i) association between an actor and a use case ii) association between two use cases iii) generalization between two use cases	6 Marks	L3	CO2
	13b	Compare functional and non functional requirements	6 Marks	L2	CO2
	13c	Discuss the eight golden rules of interface design	8 Marks	L2	CO2
		or			
14	14a	Draw a swimlane diagram for ATM management system to withdraw amount.	6 Marks	L3	CO2
	14b	Draw and explain the architecture of CASE environment	6 Marks	L2	CO2
	14c	Draw suitable diagrams and explain the different types of architectural styles	8 Marks	L2	CO2
15	15a	What are the key values and principles of Agile manifesto	6 Marks	L2	CO3
	15b	List and explain the various Scrum activities	6 Marks	L2	CO3
	15c	Explain any four agile estimation techniques	8 Marks	L2	CO3
		or			

16	**16a**	Compare DevOps and Agile methodology	**6 Marks**	**L2**	**CO3**
	16b	Draw a diagram and explain the DSDM lifecycle	**6 Marks**	**L2**	**CO3**
	16c	Explain the DevOps architecture	**8 Marks**	**L2**	**CO3**

17	**17a**	Differentiate between verification and validation	**6Marks**	**L2**	**CO4**
	17b	Define the following i) Unit testing ii) integration testing iii) system testing iv) Acceptance testing	**6Marks**	**L1**	**CO4**
	17c	What is black box testing? Construct the test cases to perform blackbox testing of a bank account program that offers 6% interest for the first Rs.50000 savings, 7.5% for Rs.150000 and 8% for amount above 1000000	**8Marks**	**L3**	**CO4**
		or			
18	**18a**	What is risk management? Explain the risk management process	**6Marks**	**L2**	**CO4**
	18b	What is the purpose of software maintenance? Explain the process of software maintenance	**6Marks**	**L1**	**CO4**
	18c	What is white box testing? Construct the test cases to perform white box testing of the given code segment (show all steps) If (num1 > num2) { if (num1 > num3) print(num1 is the greatest) else print(num3 is the greatest) } Else if (num2 > num3) print(num2 is the greatest) else print(num3 is the greatest)	**8Marks**	**L3**	**CO4**