Code No: 183CD **R22**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year I Semester Examinations, February - 2024
SOFTWARE ENGINEERING
(Common to CSE (AI&ML), CSE(IOT), AI&ML)

Time: 3 Hours **Max. Marks: 60**

Note: This question paper contains two parts A and B.
i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of **ten questions** (numbered from 2 to 11) **carrying 10 marks each**. From each unit, there are two questions and the student should answer one of them. Hence, the student should answer five questions from Part-B.

PART- A

(10 Marks)

1.a)	What is the significance of software process model?	[1]
b)	What are the advantages and disadvantages of Spiral model?	[1]
c)	What are called system requirements?	[1]
d)	What is traceability with respect to requirements?	[1]
e)	What is design quality?	[1]
f)	What is design pattern?	[1]
g)	What is the importance of software measurement?	[1]
h)	Why do we need to test the software?	[1]
i)	What is the significance of software reviews?	[1]
j)	What is software risk? Explain.	[1]

PART - B

(50 Marks)

2.a)	Discuss the evolving role of software.	
b)	With a neat sketch, explain software process framework.	[5+5]
	OR	
3.a)	Explain the changing nature of the software and common software myths.	
b)	Can we integrate waterfall model with Spiral model? If so, in what situations these are to be integrated? Discuss.	[5+5]
4.a)	List and explain various requirements elicitation techniques.	
b)	Differentiate between functional and non-functional requirements with examples.	[5+5]
	OR	
5.a)	Write and explain the structure of software requirements document.	
b)	What are the types of feasibility studies? Explain.	[5+5]
6.a)	Explain class diagram and its relationships.	
b)	Differentiate between component and deployment diagrams.	[5+5]
	OR	

7.a) Describe the conceptual model of UML.
b) Explain any two software architectural styles of importance. [5+5]

8.a) Explain the metrics used for software processes.
b) Write about the test strategies used for testing conventional software. [5+5]

OR

9.a) Compare and contrast black-box and white-box testing techniques.
b) What are the metrics used for software product? Explain. [5+5]

10.a) List and explain different types of software risks with examples.
b) What is software reliability? Explain. [5+5]

OR

11.a) Write about the significance of software quality management.
b) Explain about formal technical reviews in detail. [5+5]

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