Code No: 154CQ **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year II Semester Examinations, September/October - 2023
SOFTWARE ENGINEERING
(Computer Science and Engineering (Artificial Intelligence and Machine Learning))

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	What is the prime objective of software engineering?	[2]
b)	What is software process? List its activities.	[3]
c)	Mention any two functional requirements on software to be developed.	[2]
d)	What is the purpose of interface specification?	[3]
e)	What is the role of UML diagrams in software design?	[2]
f)	Define collaboration diagram with a neat sketch.	[3]
g)	Define system testing.	[2]
h)	List down the metrics for design model.	[3]
i)	What is software measurement?	[2]
j)	What are the key success factors for implementing RMMM effectively?	[3]

PART – B

(50 Marks)

2. What is the use of software development process models? Explain. [10]

OR

3. Explain iterative waterfall and spiral model for software life cycle and discuss various activities in each phase. [10]

4. What is requirement engineering? State its process and explain requirement elicitation problem. [10]

OR

5. Describe in detail about the elements of behavioral models with a neat sketch. [10]

6. Draw a sequence diagram for issuing a book and renewing a book in online library management system. [10]

OR

7. What are the various software architectures available for the developer according to you? Which is the best and why? [10]

8. Describe in detail about the testing strategies for conventional software. [10]

OR

9. Describe two metrics which are used to measure the software in detail. Discuss clearly the advantages and disadvantages of these metrics. [10]

10. Provide examples of different types of risks that can be addressed through RMMM. How do these risks impact project timelines, budgets, or overall success? [10]

OR

11. Explain the difference between proactive and reactive risk mitigation. When should each approach be used, and what are the typical techniques employed for each? [10]

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