

Code No: 155DB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech III Year I Semester Examinations, July/August - 2023****SOFTWARE ENGINEERING****(Computer Science and Engineering - IOT)****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 product-line software? [2]
- b) Write down the pros and cons of the concurrent development model. [3]
- c) What are the functional requirements and non-functional requirements? [2]
- d) Discuss about feasibility report in brief. [3]
- e) How to represent class, interface, object and package in UML? [2]
- f) What are issues and challenges in the design process? [3]
- g) What is Unit testing? [2]
- h) What are the attributes of effective software metrics? [3]
- i) Define FP metric. [2]
- j) Write about SQA activities. [3]

PART – B**(50 Marks)**

- 2.a) Discuss about the changing nature of the software.
- b) Explain about the unified process in detail. [5+5]

OR

- 3.a) What is RAD model? Explain with RAD model with neat diagram.
- b) Distinguish between TSP and PSP models. [6+4]

- 4.a) Discuss the problems of using natural language for defining user and system requirements, and show, using small examples, how structuring natural language into forms can help avoid some of these difficulties.
- b) Explain in detail about requirements elicitation and analysis process. [5+5]

OR

- 5.a) Using your knowledge of how an ATM is used, develop a set of use-cases that could serve as a basis for understanding the requirements for an ATM system.
- b) Describe the structure of a software requirements document. [5+5]

- 6.a) Explain terms and concepts of sequence diagrams.
b) Give a brief note on taxonomy of architectural styles. [5+5]

OR

- 7.a) What are design concepts? Explain in detail.
b) Draw use case diagrams of ATM system and explain. [5+5]

- 8.a) What is debugging? Explain about the debugging process.
b) Explain various metrics for testing and debugging process. [5+5]

OR

- 9.a) Discuss in detail about validation testing.
b) Explain about component-level design metrics. [5+5]

10. Explain the following:
a) Risk projection
b) The ISO 9000 quality standards. [5+5]

OR

11. Explain the following:
a) RMMM plan
b) Software Quality Matrix. [5+5]

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